

## WHAT IS CLAIMED IS:



A method of tracking a resolved signal, the method comprising:

- 5        determining a first value representative of an energy of the signal at a first instant before a presumed occurrence of a local optimum of the energy of the signal;
- 10      determining a second value representative of the energy at a second instant after the presumed occurrence of the local optimum;
- 15      calculating a first product of a first integer and the first value and calculating a second product of a second integer and the second value, with the first integer smaller than the second integer; + + +
- 20      generating a first logical value from a comparison between the first and the second products;
- 25      calculating a third product from a third integer and the first value and calculating a fourth product from a fourth integer and the second value, with the third integer smaller than the fourth integer;
- 30      generating a second logical value from a comparison between the third and the fourth products; and,
- 35      generating a detector output signal from a difference between the first logical value and the second logical value.

2. The method of Claim 1, wherein the first and the second instants are symmetrical in relation to the presumed occurrence of the optimum.

3. The method of Claim 1, wherein the first integer is equal to the third integer and the second integer is equal to the fourth integer.

5 4. A rake receiver comprising:

a rake finger to perform an early-late detection on a signal, the rake finger comprising:

a first energy estimator determining a first value of an energy of the signal at a first instant before a presumed

10 occurrence of a local optimum of the energy of the signal;

a second energy estimator determining a second value of the energy at a second instant after the presumed occurrence of the optimum;

a calculating arrangement calculating:

15 a first product of a first integer and the first value,

a second product of a second integer and the second value, with the first integer smaller than the second integer,

20 a third product of a third integer and the first value,

a fourth product of a fourth integer and the second value, with the third integer smaller than the third integer;

25 a logical comparator determining a first logical value from a comparison between the first and the second products and determining a second logical value from a comparison between the third and the fourth products; and

30 an early-late detector generating a detector output signal from a difference between the first and second logical values received from the comparator.

5. A computer readable medium for storing instructions to carry out a method comprising:

determining a first value representative of an energy of the signal at a first instant before a presumed

5 occurrence of a local optimum of the energy of the signal;

determining a second value representative of the energy at a second instant after the presumed occurrence of the local optimum;

10 calculating a first product of a first integer and the first value and calculating a second product of a second integer and the second value, with the first integer smaller than the second integer; and

generating a first detector output signal from a comparison between the first and the second products.

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